

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. – 16. (Cancelled)

17. (Original) A bonded magnet manufactured by mixing magnetic powder with a binding resin and then subjecting the mixture to compaction molding, in which the magnetic powder is composed of a R-TM-B based alloy having at least one element selected from Ti, CR, Nb, Mo, Hf, W, Mn, Zr and Dy (where R is at least one kind of rare-earth element excepting Dy, and TM is a transition metal mainly containing Fe), the bonded magnet being characterized in that when a density of the bonded magnet is $\rho[\text{Mg/m}^3]$, the maximum magnetic energy product $(BH)_{\text{max}}[\text{kJ/m}^3]$ of the bonded magnet at a room temperature satisfies the relationship represented by the formula of $(BH)_{\text{max}}/\rho^2[\times 10^{-9}\text{Jm}^3/\text{g}^2] \geq 2.40$, and the intrinsic coercive force H_{CJ} of the bonded magnet at a room temperature is in the range of 400 – 750 kA/m.

18. (Original) The bonded magnet as claimed in claim 17, wherein the remanent magnetic flux density $Br[\text{T}]$ of the bonded magnet at a room temperature satisfies the relationship represented by the formula of $Br/\rho[\times 10^{-6}\text{Tm}^3/\text{g}] \geq 0.125$.

19. (Original) A bonded magnet manufactured by mixing magnetic powder with a binding resin, and then subjecting the mixture to compaction molding, wherein the

magnetic powder being composed of an R-TM-B based alloy having at least one element selected from Ti, Cr, Nb, Mo, Hf, W, Mn, Zr and Dy (where R is at least one kind of rare-earth element excepting Dy and TM is a transition metal mainly containing Fe), the bonded magnet being characterized in that when the density of the bonded magnet is $\rho[\text{Mg/m}^3]$, the remanent magnetic flux density $B_r[\text{T}]$ of the bonded magnet at a room temperature satisfies the relationship represented by the formula of $B_r/\rho[x10^{-6}\text{Tm}^3/\text{g}] \geq 0.125$, and the intrinsic coercive force H_{CJ} of the bonded magnet at a room temperature is in the range of 400 – 750 kA/m.

20. (Original) The bonded magnet as claimed in claim 17, wherein the magnetic powder is composed of an alloy composition represented by $R_x(\text{Fe}_{1-a}\text{Co}_a)_{100-x-y-z}\text{B}_y\text{M}_z$ (where R is at least one kind of rare-earth element excepting Dy, M is at least one kind of element selected from Ti, Cr, Nb, Mo, Hf, W, Mn, Zr and Dy, x is 7.1 – 9.9at%, y is 4.6 – 8.0at%, z is 0.1 – 3.0at%, and a is 0 – 0.30, and the magnetic powder is constituted from a composite structure having a soft magnetic phase and a hard magnetic phase.

21. (Original) The bonded magnet as claimed in claim 17, wherein the compaction molding is carried out under the temperature that the binding resin is melted or softened.

22. (Original) The bonded magnet as claimed in claim 17, wherein the maximum magnetic energy product $(BH)_{\max}[\text{kJ/m}^3]$ is equal to or greater than 50kJ/m^3 .

23. (Original) The bonded magnet as claimed in claim 16, wherein the absolute value of the irreversible flux loss (initial flux loss) is equal to or less than 6.2%.

24. – 34. (Cancelled)

35. (Original) The bonded magnet as claimed in claim 19, wherein the magnetic powder is composed of an alloy composition represented by $R_x(Fe_{1-a}Co_a)_{100-x-y-z}B_yM_z$ (where R is at least one kind of rare-earth element excepting Dy, M is at least one kind of element selected from Ti, Cr, Nb, Mo, Hf, W, Mn, Zr and Dy, x is 7.1 – 9.9at%, y is 4.6 – 8.0at%, z is 0.1 – 3.0at%, and a is 0 – 0.30, and the magnetic powder is constituted from a composite structure having a soft magnetic phase and a hard magnetic phase.

36. (Original) The bonded magnet as claimed in claim 19, wherein the compaction molding is carried out under the temperature that the binding resin is melted or softened.

37. (Original) The bonded magnet as claimed in claim 19, wherein the maximum magnetic energy produce $(BH)_{max}[kJ/m^3]$ is equal to or greater than $50kJ/m^3$.

38. (Original) The bonded magnet as claimed in claim 17, wherein the absolute value of the irreversible flux loss (initial flux loss) is equal to or less than 6.2%.